National Advisory Council for
Environmental Policy and Technology

February 20, 2007

The Honorable Stephen L. Johnson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: NACEPT's Initial Thoughts on EPA's Role in Biofuels

Although we are still in the early stages of our assignment to provide advice on biofuels, developments in this area are moving so rapidly within and outside of the federal government that we want to convey our initial impressions and make some recommendations for your consideration. We have placed a high priority on getting these to you as we learned that the Department of Energy (DOE) is expected to complete the National Biofuels Action Plan by March. This plan is being developed through close coordination with all federal partners including EPA. We are hoping that you will soon have time to review our suggestions as you meet with your senior staff, so that EPA can provide the important and broad guidance hoped for by all.

The National Advisory Council for Environmental Policy and Technology is being asked to provide EPA with its views on how the Agency can best organize and act to encourage the use of renewable fuels and to help ensure that they are developed in a way that is sustainable over the long term. NACEPT has created a working group to focus on this charge. Its members have already met several times with EPA staff, even as the charge is being finalized. At the December 2006 NACEPT meeting, the working group met with senior executives responsible for biomass programs at EPA, DOE, USDA, DOI and EPA Region 7 to get an overview of current and planned activities. There was a lively and productive discussion among all those attending which made clear to us just how fast biofuels developments are moving and how much people in other parts of government are counting on EPA to play a major role.

We believe that biofuels development is important for our nation and is a critically important area for EPA involvement. The President has made the development of biofuels a top national priority in both his energy and climate policy. Most recently, in his 2007 State of the Union address, the President called for increasing the size and expanding the scope of the current renewable fuel standard (RFS) to require 35 billion gallons of renewable and alternative fuels in 2017 – nearly five times the 2012 target now in law. The use of biofuels can make possible

major reductions in greenhouse gas emissions from the transportation sector. Biofuels are the only alternative liquid transportation fuel currently available to displace gasoline consumption in a significant way and reduce what President Bush has called the U.S. "addiction to oil." His Advanced Energy Initiative (AEI) sets a goal of making cellulosic ethanol technologies cost competitive in the next 6 years. To support the AEI, the Department of Energy has set the ambitious goal of replacing 30% of our current gasoline consumption with biofuels by 2030 (the "30x30" initiative). Such a massive increase in biofuel production could have major beneficial or deleterious environmental impacts. These impacts will be determined by a number of factors, including feedstock sources, cultivation practices, technological choices and advances, and the policies that are put in place to meet this national goal.

As you are well aware, EPA has broad direct statutory authority under the Clean Air Act Amendments (CAAA) to regulate fuel quality and emissions from refining and production facilities for all fuels, including biofuels. The Agency has further biofuels-related authority through the Energy Policy Act of 2005, under which you are preparing to finalize the National Renewable Fuels Standard (RFS) Program. This legislation also gives EPA a number of other specific roles related to the biofuels mission, such as biorefinery permitting oversight and guidance, fuel formulation and vehicle certification. Where the EPA role is clearly specified, the Office of Air and Radiation (OAR) has the lead responsibility for developing and promulgating the implementing regulations.

However, our interaction with leaders of biofuel efforts in other Federal agencies made it clear that they are expecting and need EPA to play a broader role that goes beyond what EPA is required to do. They see EPA as the critical agent for ensuring that biofuel development avoids environmental pitfalls and stays on the path of sustainable success. They are looking to EPA for assistance in dealing with environmental issues related to biofuels that range beyond OAR's areas of responsibility and expertise. As one example, the water use for biofuel production could have a large environmental footprint. Researchers at the University of Illinois recently made a presentation to the Office of Science and Technology Policy in which they estimated that meeting national biofuel goals would require many millions of acre-feet of new water, or water diverted from other uses, to operate biorefineries and irrigate crops. They warned that in parts of the country biofuel production could degrade water quality, accelerate aquifer depletion, and ultimately be undermined by unsustainable approaches to water use.

A wide range of important questions about the environmental impacts of biofuels need to be more adequately addressed in order to meet our national biomass goals and which, by their nature, need the type of stewardship and oversight which only EPA can provide. We recognize that RFS rulemaking begins to address some of these issues, such as the impacts of biofuels on vehicle emission performance and air quality, lifecycle greenhouse gas emissions, and some of the projected impacts on the agricultural sector. EPA's stewardship, in cooperation with other federal agencies, also will be vital for addressing many other questions: Which feed stocks and locations for growing them should be encouraged based on environmental considerations? What are the best pathways for increasing distribution of biofuels into the market based on emissions characteristics and feedstock type? What are the optimal locations for growing and distributing these feedstocks and fuels? What key environmental considerations (such as water availability, nutrient and pesticide applications, carbon benefits and habitat preservation) should be accounted

for in the production and distribution of biofuels feedstocks? What harvesting practices are best for soil quality, soil carbon, water quality, and wildlife populations? How might GMOs for biomass crops affect long-term ecosystem diversity and disease resistance? How do different conversion technologies compare in terms of emissions and efficiency? What environmental characterizations of new, integrated cellulosic conversion technologies will be needed to help expedite state permits? What could be the impact of using E-85 on states' ability to meet ambient air quality standards? How can we protect water quality as biofuels production grows in scale? What proximity between biofuel system components (feed stocks, conversion technologies, distribution infrastructures) optimizes environmental and economic benefits? What approaches produce the most net energy (energy content of the fuel minus energy used to produce the fuel)? How can we encourage innovative, environmentally superior approaches? How will large-scale biomass production impact EPA's ability to achieve its environmental strategic goals? What new kinds of environmental indicators and decision support tools could help keep biofuels on a sustainable development path?

Even as these questions and concerns are being brought to your attention, the biofuels industry and consumer acceptance of biofuels are expanding rapidly. Federal fleets are moving to biofuels as a means of meeting the *Energy Policy Act* and the *Executive Order: Strengthening Federal Environmental, Energy, and Transportation Management* requirements; some thirty states have mandated the use of biofuels in their fleets; and private sector organizations are embracing biofuels for ethical, operational and financial reasons. In advance of the full development of certification, permitting or regulatory protocols, small production biorefineries are coming on line day after day. Although the Agency's research issues are critical and immediate, the regulatory and program issues are no less critical. Needless to say, these matters are particularly important as the Agency proceeds to finalize the fiscal 2007 budget, to support the presentation of the fiscal 2008 budget, and to plan for the development of the fiscal 2009 budget.

Assuring that large-scale biofuels production proceeds in a sustainable way will require cross-government cooperation and new forms of dialogue and coordination within the EPA itself. To that end, we offer the following recommendations.

First, **act promptly to make the high-level appointment to the Interagency Biomass R&D Board contemplated by the legislation**. The Biomass R&D Act of 2000 requires that participating agencies have Senate-confirmed Board representatives. A high-level appointment is justified in practice as well as by law, because the Board is emerging as the key body for Federal coordination on biofuels. It commissioned the recent activities aimed at developing a Federal biofuel "Posture Plan."

Second, **develop an integrated, collaborative, multi-media biofuel strategy and create a position of Biofuels Coordinator** charged with organizing an Agency-wide dialogue on EPA's role in the biofuels mission. The Biofuels Coordinator should be someone who is familiar with the Agency's operations and personnel and who can work well with people in other parts of government involved in biofuel initiatives. The biofuels strategy should embrace all the roles that EPA can play including research and development, policy and regulation, a broad range of voluntary programs and projects at

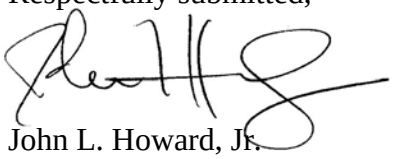
the regional, state and local levels, and a leadership/coordinating role on environmental issues within the Federal family.

Third, **give this EPA biofuel initiative strong, highly visible support from the top**. For a cross-media initiative like this to be effective, there needs to be a high level of commitment and a sense of urgency. Urgency is justified, because developments in this area are moving very fast, and whether or not biofuel development takes a sustainable path will be decided by efforts and investments over the next few years but lasting well into the later part of this century.

Finally, we recommend that **this initiative should be viewed, developed and evaluated as a deliberate experiment** in how EPA can take a more coherent approach to the acceleration of clean and efficient energy technologies. Lessons learned from this initiative can be applied in EPA efforts to foster other sustainable energy technologies.

We appreciate this opportunity to provide these initial reflections. We look forward to submitting a fuller, more detailed report to you during the year ahead that addresses the questions and concerns we've raised in this letter.

Respectfully submitted,



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